

The National Grid Company plc

**Minutes of the
Grid Code Review Panel
National Grid House, Coventry
5th September 2002**

Members/Alternates

Andy Balkwill	National Grid (Chair)
David Payne	National Grid (Secretary)
Geoff Charter	National Grid
Patrick Hynes	National Grid
Nasser Tleis	National Grid

Advisors/Observers

Robert Lane, CMS Cameron McKenna

Ian Gray)	Network Operators
Mike Kay)	
David Gilliland)	

Bridget Morgan	OFGEM
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John Norbury)	Generators with Large Power Stations with total Reg. Cap.> 5GW
Graham Trott)	
John France)	

David Ward	Generators with Large Power Stations with total Reg. Cap.< 5GW	Charlie Zhang, LPC
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Malcolm Taylor	Generators without Large Power Stations
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David Nicol	EISO (Alternate)
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Roger Salomone	BSC Panel
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Brian Sequeira	Suppliers
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(No Rep)	Non Embedded Customers
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1 APOLOGIES FOR ABSENCE

1226 Apologies were received from Edgar Goddard (Chairman), Francois Boulet (EISO's - represented by David Nicol), Jan DeVito and Chris Rowell (BSC Panel - represented by Roger Salomone). The chairman welcomed David Gilliland (DNO Representative who was attending in place of John Palmer who had now retired).

2 APPROVAL OF MINUTES OF PREVIOUS MEETING

1227 With respect to minute 1180 related to GCRP governance and processes, Graham Trott commented that he was surprised that there was no associated action. This was dealt with in the subsequent discussion related to David Nicols letter.

1228 The minutes were otherwise agreed as a true record of the previous meeting.

3 MATTERS ARISING FROM PREVIOUS MEETING (not covered below)

- 1229 With reference to minute 1205 related to clarification of CC.6.3.1, John Norbury stated that following the last GCRP meeting he had discussed this issue with Geoff Charter in order to understand the basis of National Grid's interpretation of CC.6.3.1. Following this discussion, he was concerned that National Grid was specifying the requirement for Hydro units and windfarms to provide frequency and voltage control in connection agreements whilst this requirement was not specified in the Grid Code Connection Conditions.
- 1230 Robert Lane responded explaining that in his view CC.6.3.1 stated that where hydro units are designed to provide frequency and voltage control then they must comply with Grid Code provisions. Where this service was required for system security the appropriate connection offers would state that the capability was required and explain the need. Panel members generally did not agree with National Grid's interpretation of CC.6.3.1.
- 1231 It was also explained that at the last meeting GCRP members had decided to defer a proposal to clarify CC.6.3.1 until proposed generic Grid Code provisions for wind powered generation had been developed. This was to be covered by item 6.3 of the agenda.
- 1232 Malcolm Taylor had also undertaken at the May meeting, to inform his constituents of National Grid's interpretation of the provisions of CC.6.3.1 and that in National Grid's view CC.6.3.1 did not provide a blanket exemption for renewables; to explain the need to factor in design issues within their development timescales and that their ultimate recourse was to challenge National Grid's requirements via Ofgem. Malcolm stated that as a result he had received comments from his constituents that they did not agree with National Grid's interpretation of CC.6.3.1.
- 1233 It was agreed that this issue should be covered by the issues raised under agenda item 6.3.
- 3.1 Letter from David Nicol**
- 1234 In his letter of 24 May 2002 David Nicol had raised concerns related to the processes followed by National Grid with respect to consultation paper A/02.
- 1235 Andy Balkwill stated that there were a number of lessons to be learned from the associated debate and there was a need to ensure that Panel members were comfortable with the approach taken when dealing with Grid Code modifications. However Grid Code changes, especially those associated with CUSC and BSC modifications, did need to be pursued in a timely fashion. Andy suggested that Panel members reconsider GCRP paper 01/26 (which suggests how potential Grid Code changes may be expedited to fit in with the proposed changes to other documents) and feed comments back to the Chairman or Secretary.
- 1236 David Nicol noted that despite his comments in the letter there was no apparent opportunity to discuss progress with Consultation paper A/02 and that the only debate on the associated issues had occurred six months previously, even though in the meantime there had been much work done external to the GCRP. David remained disappointed with the process.
- 1237 Geoff Charter explained that there had been a delay with progressing Consultation paper A/02 due to slow responses to the paper but the situation was now such that a draft report to the Authority had been prepared and circulated to respondents. However the Grid Code process was less prescriptive than those associated with the CUSC and BSC and historically, the GCRP were not normally involved in live consultations and although any ensuing debate associated with particular

consultations would be interesting it was difficult to see what affect that would have on live consultations. David Ward commented in the difference in process in the Scottish Panel whereby User comments were brought back to the Panel for discussion. Robert Lane pointed out that a report on Consultation papers was always an agenda item and Panel members had the opportunity to raise issues under that item.

- 1238 With respect to the minutes of the last meeting Graham Trott pointed out that it was minuted under minute 1180 that Panel members had expressed concern with the process and in particular that associated with A/02 and Graham was surprised that that there had been no associated action to deal with the issue. Andy Balkwill invited Panel members to provide views on how these issues could be dealt with. An agenda item related to Grid Code governance would be included for the next meeting.
- 1239 **Action:** *Include Governance issues as an Agenda item for the November GCRP meeting. GCRP members to provide views on governance including further thoughts on September 2001 paper 01/26 to GCRP Secretary.*

3.2 Summary of actions (GCRP 02/14)

- 1240 David Payne reported that all actions were either complete or to be discussed under later agenda items.

3.3 Report on the status of Time Tagging, NTO/NTB and QPN issues. (Action 1102)

- 1241 Patrick Hynes presented a report on the current status with these issues using slides (a copy of the slide presentation was circulated to Panel members following the meeting). In each case Patrick's report outlined the pro's and cons associated with system changes and questioned whether a business case could be made from an operational point of view and highlighted the need for an industry business case. In the case of NTO/NTB relaxation from two minute limitation could require amendments to existing contracts to enable the procurement of additional response.
- 1242 With respect to NTO/NTB John Norbury stated that on the plus side extension of the time limit from two minutes potentially enables more efficient operation in the Balancing Mechanism and longer NTO/NTB could reduce costs and hence reduce prices. John also stated that although National Grid had identified many downsides associated with the introduction of longer NTO/NTB, he urged National Grid to have confidence in the commercial operation of the Balancing Mechanism and allow Bids and Offers to be most efficiently met. He suggested that generators might not wish to increase their NTO/NTB'S beyond the present 2 minutes if the rules were relaxed due to the commercial incentives of the Balancing Mechanism. Patrick considered that if generators were in a position to submit shorter times and so happy with two minutes then there appeared to be no reason to change from the current position.
- 1243 With respect to Time Tagging/Time Varying Dynamic Parameters John Norbury felt that its implementation would result in an increased efficiency of the Balancing Mechanism. He also suggested that its implementation might enable the group of <50MW generators to be employed more in the Balancing Mechanism since National Grid would have advance knowledge of their dynamics and therefore more time to assess their Bid/Offer submission. Patrick agreed that the

introduction of Time Tagging does appear at first sight to have some associated benefit but felt that increased costs associated with software implementation negated the benefits. Patrick emphasised that a definition of what was meant by flexible dynamic data was needed and suggested that Time Tagging was at one end of the spectrum and Time Varying Dynamic Data was at the other. National Grid would be looking to the industry to build a business case to justify implementation.

- 1244 With respect to QPN's the Panel agreed that this was a low priority issue.
- 1245 Andy Balkwill suggested that these issues could become the subject of an industry wide consultation. However it was agreed that Panel members should provide views on the way forward before any decision on a consultation was taken.
- 1246 **Action:** *GCRP members to provide written comments and views on the issues by the November meeting.*

4 REPORT ON PROGRESS OF CONSULTATION PAPERS (GCRP 02/15)

- 1247 D/01 – Provisions relating to Embedded Large Power Stations. The Authority continued to consider the report.
- 1248 A/02 – Implications to Grid Code of CUSC Amendment to clarify CUSC 6.5.1. A draft report had been prepared and circulated to respondents.
- 1249 B/02 - Grid Code references to PES and STS and other housekeeping changes. Verbal approval for the changes had been received from the Authority and an implementation date of 30th September 2002 agreed.
- 1250 C/02 – Beyond the Wall, One hour Gate Closure and Use of Dynamic Data. Verbal approval for the changes had been received from the Authority and an implementation date of 30th September 2002 agreed.
- 1251 D/02 – Proposed changes to GRID Code OC5. A draft Report to the Authority had been circulated to Panel members for comment. No comments had been received and it was intended to send the Final Report to the Authority on 6th September.

5 PROGRESS ON CURRENT GRID CODE MODIFICATION PROPOSALS

5.1 CC.6.3.3 Working Group (GCRP 02/16)

- 1252 Geoff Charter provided an update on the working group progress. The group had already met 5 times and a substantial amount of analysis had been carried out. It was expected that the next meeting in September could be the last and a final report was expected to be presented at the November GCRP meeting. A range of options for CC.6.3.3. requirements are under consideration and it was expected that the next meeting would suggest a way forward. Geoff explained that the initial work carried out had been based on empirical calculations and since then further in depth analysis had been carried out and it was expected that a summary of this analysis would be included in the final report.
- 1253 Malcolm Taylor asked if there was any interaction between the CC.6.3.3. Working Group and the (CUSC) Balancing Services Standing Group (BSSG) is considering Reactive Market and Frequency Response Market issues. Geoff explained that CC.6.3.3. is not really related to Frequency Response, although it might be feasible

to construct a market for trading CC.6.3.3 over/under capability provision. Graham Trott stated that as a CC.6.3.3. Working Group and BSSG member he was able to relate issues to both groups.

5.2 Embedded Power Station Working Group Update (GCRP 02/17)

- 1254 Geoff Charter provided an update on progress. The working group has met twice with a further meeting scheduled for October 2002. The group had agreed Terms of Reference and at the last meeting Network Operators' representatives had agreed to consider in the first place, existing Grid Code provisions for embedded generators with respect to their continued relevance and secondly the most appropriate location for any provisions. Malcolm Taylor explained that the equivalent DCRP working group was considering data exchange between Network Operators and embedded generators with a view to determining whether the existing processes could be improved.
- 1255 Mike Kay stated that he had been concerned with the wording of the minutes from the working group meeting and the text of paper 02/17 as they both seemed to suggest that the Working Group was looking to relocate Grid Code provisions to other documents without first considering the relevance and appropriateness of the existing provisions. Although partly reassured by Geoff's presentation, he remained concerned that this WG might have the wrong focus. He said he would alert DNOs to his concerns.

5.3 HVDC Interconnectors Working Group Update (GCRP 02/18)

- 1256 Geoff Charter provided an update on progress. The group had met on three occasions with the next meeting planned for September 2002. The group had been addressing appropriate provisions in the Connection Conditions, Planning Code and Balancing Code 3. It was proposed that new provisions would state that new HV DC Interconnectors would be required to provide a capability for providing Frequency Response. How such Frequency Response would be achieved would be the subject of a separate commercial agreement which would be referred to in BC3. These proposals were to be discussed at the next meeting in September. A further meeting was expected with a report to the GCRP in November.
- 1257 Malcolm Taylor expressed concern that it appeared that it was proposed to ensure that provisions were included at the design stage of a scheme rather than allowing developers to make commercial decisions to include response to meet a need. Andy Balkwill responded that it would be difficult and expensive to retrofit facilities at a later date if they had not been designed in.
- 1258 David Ward expressed the view that that it would be sensible and fair for HV DC Interconnectors to be subject to the same requirements as other generators in respect of response.
- 1259 Charlie Zhang commented that he recalled that a DC link was not allowed to provide frequency response. Geoff explained that the existing DC link had been designed in the 1980's without the facility to provide frequency response. He further noted that any use the DC link to provide frequency response had an impact on the systems at both ends of the link. Andy Balkwill noted that the DC link had not been designed for providing frequency response because the CEGB had technical concerns with respect to its effect on the system e.g. sub-synchronous-resonance.

1260 It was pointed out that there was also a link between the work of this group and the proposals related to 'generic' provisions to be discussed later under paper GCRP 02/21.

6 NEW GRID CODE RELATED ISSUES.

6.1 OC8 – Working near to HV Apparatus in substations (GCRP 02/19)

1261 Geoff explained that this paper had been drawn up by Richard Scarth and Robert Lane and recognised that extreme care was required when dealing with safety issues. Grid Code OC8 deals with the co-ordination of isolation between two User systems when work is being carried on one or other of the systems. Paper 02/19 dealt with work being carried out on third party non-electrical items within a substation boundary. Work being carried beyond the substation boundary was covered under Health and Safety at work provisions. The paper identified four options for dealing with the situation and indicated that National Grid' preferred option was to issue a Proximity Permit for Work (option A in the paper).

1262 John Norbury questioned the need for the proposed changes and asked why it was not possible to deal with the situation using existing procedures. Robert Lane explained that the need arose due to work being carried out by two different parties across a boundary and there was a need to develop and include in the Grid Code a consistent and unambiguous approach. John suggested that any proposed consultation paper should fully describe the perceived problem to ensure recipients fully understand the proposals and also describe more fully the reasons for selecting option A.

1263 David Ward suggested that the term 'Site Representative' used in the proposed OC8.8.3.3 should be clarified in the paper. It was also suggested that the term "Proximity Permit for Work" could be confusing as it implied a new specific document. It was agreed that the document would be a standard Permit for Work. GCRP members were more comfortable with the proposals when it was made clear that a new document was not being proposed. Appropriate changes to the terms would be made.

1264 It was agreed that the paper should be amended to explain the problem fully and explain why maintaining the Status Quo was not an option. Panel members were invited to further consider the paper and provide addition comments to Geoff Charter. The paper would then be revised and circulated to Panel members in the form of a draft Consultation paper.

1265 **Action:** *Panel members to provide comments on paper 02/19. National Grid to prepare and circulate draft consultation paper.*

6.2 Clarification of Percentage terms (GCRP 02/20)

- 1266 Nasser Tleis explained that this paper arose out of an action from the May meeting relating to the need to explain a percentage parameter used in the proposed OC5 change. The paper proposed a new defined term of Phase (Voltage) Unbalance based on a definition contained in ER P29. This would require consequential changes to CC.6.1.5 and CC.6.1.6 and to the proposed OC5.5.3, if the OC5 changes are approved by the Authority. National Grid now intended to prepare a consultation paper.
- 1267 Charlie Zhang thanked National Grid for pursuing this action. Charlie asked that if a consultation paper is produced the reference to the assumption that the reader understands the definition of phase unbalance and industry practice in calculation should be removed.
- 1268 It was agreed that a Consultation paper should be prepared.
- 1269 **Action:** *National Grid to prepare a consultation paper on the clarification of Percentage Terms.*

6.3 Grid Code provisions for 'Generic' connections including Renewable Generation (GCRP 02/21)

- 1270 Nasser Tleis presented the paper which suggested need to include Grid Code provisions related to renewable and other new types of generation. Nasser explained that although new developments in generation and interconnector technology were not currently covered in the Grid Code, the introduction of new provisions required careful consideration to ensure that the Grid Code was not subject piecemeal modification. A piecemeal approach would be inefficient and could result in the Grid Code becoming unmanageable. Nasser suggested the most efficient way forward would be to introduce a set of 'generic' provisions to capture all types of technology. However to determine the feasibility of this approach it was suggested that a GCRP working group should be initiated. The paper included draft terms of reference but it was felt that these could include investigation of the CC.6.3.1 provisions (discussed earlier). It was also felt desirable to include the output from the HV DC working group in any 'generic' provisions.
- 1271 Nominations for this working group were requested by 20th September 2002 with a view to arranging the first meeting by mid October.
- 1272 **Action:** *GCRP members to provide nominations for the 'generic' provisions working group by 20th September.*
- 1273 David Nicol felt that representatives from the renewables and windfarm communities should be included on the working group. Nasser stated that it was expected that the group would be made up from GCRP members. Malcolm Taylor offered to ensure that those members of AEP concerned with renewables and windfarms would be informed of the formation of this working group. Malcolm also asked whether the group would be considering embedded or directly connected generation. Nasser stated that the focus would be on licensed generation.
- 1274 John Norbury stated that although the CC.6.3.1. provisions would be included in the discussion there was still a problem of clarification for those parties looking to

connect before any new provisions were implemented. Nasser pointed out that the conclusion at the last meeting was that there was no benefit in changing the existing CC.6.3.1. provisions until new provisions for windfarms and other renewables had been developed. Nasser felt that the earliest that this new working group could report back was the May 2003 meeting. In the meantime National Grid connection agreements would specify requirements and National Grid could provide guidance to new generators if required. Malcolm pointed out that in the meantime generators also had recourse to Ofgem but agreed that the issues need to be resolved as soon as possible.

1275 John also commented that a frequency response market would enable developers to determine whether the additional cost of designing voltage or frequency responsive plant was worthwhile.

1276 John further suggested that all technical requirements should be specified in the Grid Code Connection Conditions, in an open and transparent manner, and additional technical requirements should not be specified by National Grid in connection agreements. David Ward agreed that the aim should be to ensure that Grid Code provisions were comprehensive such that potential developers understood what provisions might be required at the outset.

7 OTHER GRID CODE RELATED ISSUES

7.1 BSC/CUSC Modification Proposals (GCRP 02/22)

1277 Update on modification proposals which may have an impact on the Grid Code:

BSC Modification Proposals

P77– This could now be removed from the list as the final report to Ofgem had not identified any impact on the Grid Code.

P80/87 – A BSC Panel consultation paper had been issued which contained a number of alternative modification proposals. It was not clear what the impact on the Grid Code would be at this stage.

1278 John Norbury noted that, whilst he understood that intertrips may be applied in the event of a non-compliant connection or as an alternative to infrastructure reinforcement, the Grid Code was silent on the requirement for intertrips. He suggested that the requirements should be specified in the Grid Code and asked how the need for an intertrip and associated technical requirements for a particular scheme were identified. David Nicol asked National Grid to clarify if this requirement was a standard condition in connection agreements.

1279 **Action:** *National Grid to clarify if the specification of the need and technical requirements for an intertrip are standard conditions in connection agreements.*

CUSC Amendment Proposals

CAP010 – Frequency Response Imbalance Exposure. The Amendment Report had now been submitted to the Authority. No impact on the Grid Code had been identified and this could be removed from the list.

MEC – National Grid was now considering a CUSC amendment related to Transmission Access and it was proposed include the issue of MEC in this debate. It was proposed to introduce a new term and remove the existing term from the

CUSC. National Grid felt there was no value in addressing this issue separately either under the CUSC or the Grid Code.

7.2 Annual Summary Report on ROCOF tripping incidents (GCRP 02/23)

- 1280 David Payne went through the summary which detailed the position for the period from August 2001 to July 2002. During this period there had been four incidents meeting the criteria to trigger reporting only two of which resulted in ROCOF and subsequent losses of embedded generation of 6MW and 1.8MW.
- 1281 David Ward stated that the paper did not refer to typical settings for ROCOF relays and asked how the reported rates of change of frequency related to the actual settings of relays. Geoff Charter made the point that measurement of the rate of change of frequency could be an issue, as the period of time over which the change is measured is critical.
- 1282 Geoff explained that the main reason for the initiation of ROCOF reporting was initially to determine whether ROCOF relays were so sensitive that they caused unnecessary ROCOF tripping incidents. It was felt that it was valuable to maintain ROCOF reporting.
- 1283 **Action:** *National Grid to continue with ROCOF reporting procedures and present next annual summary at the September 2003 GCRP meeting.*

7.3 Recently Issued Scottish GCRP Consultation Papers.

- 1284 This new item was introduced to bring to the attention any issues being raised by the Scottish GCRP. However no consultation papers had been identified for this meeting.

8 ANY OTHER BUSINESS

OC2/OC1 Review

- 1285 David Ward stated that he had recently received a Guidance Note related to OC2 data which appeared to be at odds with the actual requirements of OC2. In addition OC2 contained provisions that were relevant pre NETA but were no longer appropriate. David felt that a thorough review of OC2 should be initiated. John Norbury also felt OC1 would benefit from a review.
- 1286 David Payne responded that OC1 and OC2 were both the subjects of National Grid internal reviews and undertook to report back to the GCRP on progress at the November GCRP meeting.
- 1287 **Action:** *National Grid to report to the November GCRP meeting on the progress of internal reviews of OC1 and OC2.*

Reports to the Authority on National Grid website.

- 1288 Geoff Charter reported that historically Reports to the Authority had not been circulated to the industry generally due to the administration involved in sending out large numbers of paper copies. However with the latest internet technology Consultation papers were readily available to all via the website and it was felt that it would be useful to now include associated reports to the Authority.

1289 GCRP members agreed that reports to the Authority should be included on the National Grid website, subject to the resolution of any confidentiality issues associated with responses included in the report.

1290 **Action:** *Include future Reports to the Authority on the National Grid website.*

BETTA

1291 Bridget Morgan reported briefly that Ofgem was considering the relationship between the GB System Operator and Transmission Owners. The affect on the Grid Code was the possible initiation of a GB Grid Code. Bridget stated that Ofgem/DTI intended to issue a consultation paper seeking views on a GB Grid Code around the end of September with conclusions expected to be published in November. Grid Code development work would then be expected to commence early in 2003. The consultation would be concerned with the content and drafting issues associated with the Grid Code along with the governance structure, noting that some issues would be addressed in later BETTA consultation papers.

1292 Bridget asked GCRP members to consider and provide any response to the questions;

- a) Was there a need for a Grid Code
- b) If so what role should it have under BETTA.

9 DATE, TIME & VENUE OF NEXT MEETING

1293 Thursday **21st November 2002**, starting at **10:30 am**, at National Grid House